



## **Chapter X**

# **The CIO as Chief Knowledge Officer**

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## **Introduction**

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The centrality of knowledge in organizations is reflected in the emergence of the knowledge-based view as an important theoretical stance in contemporary organizational research. Theoretical proposals indicate that advantages for a firm arise from cooperative social contexts that are conducive to the creation, coordination, transfer, and integration of knowledge distributed among its employees, departments, and cooperating agencies.

In some organizations there is the position of a knowledge manager — often called chief knowledge officer (CKO). While the CIO is in charge of systems for electronic data and electronic information, the CKO is in charge of systems for knowledge management. Since knowledge is information combined with reflection, interpretation, and context, the CIO might expand his or her power base by occupying or combining the CKO position as well.

## Knowledge Management

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Knowledge is a complex concept and a number of factors determine the nature of knowledge creation, management, valuation, and sharing. Organizational knowledge is created through cycles of combination, internalization, socialization, and externalization that transform knowledge between tacit and explicit modes.

Knowledge management is of particular relevance to information systems because the functionalities of information technologies play a critical role in shaping organizational efforts for knowledge creation, acquisition, integration, valuation, and use. Information systems have been central to organizational efforts to enable work processes, flows of information, and sources of knowledge to be integrated and for synergies from such combinations to be realized.

The focus of the deployment of knowledge management systems in organizations has been on developing searchable document repositories to support the digital capture, storage, retrieval, and distribution of an organization's explicitly documented knowledge. Knowledge management systems also encompass other technology-based initiatives such as the creation of databases of experts, the development of decision aids and expert systems, and the hardwiring of social networks to aid access to resources of non-collocated individuals (Sambamurthy & Subramani, 2005).

Information systems developers have evolved several frameworks to articulate themes related to knowledge management. There is a diversity of organizational processes through which information systems affect the management of intangible assets in and between organizations. Furthermore, technical and social processes interact in complementarities to shape knowledge management efforts. For example, although information technologies foster electronic communities of practice, there are social dynamics through which such communities become effective forums for knowledge dissemination, integration, and use.

Sambamurthy and Subramani (2005) presented three types of organizational problems where knowledge management systems can make a difference:

- **The problem of knowledge coordination:** Individuals or groups face knowledge coordination problems when the knowledge needed to diagnose and solve a problem or make an appropriate decision exists (or is believed to exist), but knowledge about its existence or location is not available to the individual or group. Knowledge coordination problems require a search for expertise and are aided by an understanding of patterns of knowledge distribution – of who knows what and who can be asked for help. Research suggests that personal, social, or organizational networks facilitate awareness about knowing entities and their possession of knowledge. Similarly, information technologies

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